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PROPOSAL FOR MEETING THE BASIC REQUIREMENTS FOR RESOURCE PLANNING

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Environmental Protection Agency
Atlanta, Georgia

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PROPOSAL FOR MEETING THE

BASIC REQUIREMENTS FOR RESOURCE PLANNING

By

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Federal Water Quality Administration
Southeast Region
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C. V. Lyle

This paper is concerned with the practical aspects of public and private group efforts at planning--both short- and long-term. Coordinated planning between programs and areas must be developed from commonly accepted economic base data projections. Such projections for small areas can best be achieved through the creation or reorientation of a center in each state with official responsibility for developing state and local area projections. This responsibility would strengthen rather than conflict with the programs of Federal agencies or of state agencies now in the Federal-state cooperative programs in such fields as current estimates of local area population and personal income.

In this connection, please permit me to make the obvious point, as a matter of emphasis, that a major problem stems from the fact that we (professional economists, planners, administrators, and so on) are far better supplied with national, regional, and state projections than with those of a local nature. However, it is the local projection which must be used for most investment planning.

1/ The word "Resource" is used in its broadest sense--the human resource as well as others more commonly included. It is suggested that these basic requirements apply not only to plan formulation and evaluation but to effective implementation as well.

The Nature of Data Projections

My own experience as a professional economist has been more explicitly related to efforts at developing program and project plans for Federal agencies. Consequently, this paper will likely be oriented more toward Federal efforts than might be desirable. However, we believe it can be demonstrated that the basic requirements for meaningful planning (amenable to successful implementation) are essentially the same; whether Federal, non-Federal public, or private. Details required for specified purposes will, of course, be quite different, but all planning must be concerned with assumptions regarding changes in population, employment, and industry during the period for which the plan is developed regardless of whether planning is for water quality control, education, highway construction, product and sales, or other action. In brief, our primary concern is people.

Irrespective of the meaningfulness of such projections, many Federal plans are required to cover periods of 50 years or more. One basic argument for these long-term considerations is that capital is oftentimes "sunk" in structural facilities having a physical, if not economic, life of 50 years or more. If these structures, as is often the case, are relatively inflexible regarding purposes and alternative uses, it is apparently assumed that they must be demonstrated to have a measurable use value for the built-in purposes and uses for the estimated life of each structure

or group of structures. Actually, although this phenomenon is likely more common to Federal projects (such as big dams and reservoirs) it is certainly not unique to them. Private construction frequently requires commitments for 20 to 30 years or more. Poor individual planning for the construction of a private residence often leads to economic and social hardships, if not near disaster, for example. Private business and industrial structures and appurtenances, particularly the more expensive ones, involve more people and a longer time span over which they succeed or fail, as a rule, than does a private residence.

The preceding discussion is not intended to infer that the best possible planning can always assure success or that the use of resources will necessarily be optimized in any real sense. Robert Burns, I believe, put it more succinctly. However, it is expected that realistic and meaningful planning will minimize the probability of failure. There are numerous reasons for this, some of which are quite obvious. The greatest weakness lies in the assumptions which must be made because there are no "facts" and relatively few reasonable certainties available regarding the future conditions, even for the short-run, much less for the long-run. As a matter of record, I think it can truthfully be said that relatively few facts are available at present. Much of the data we use as factual are actually out of date before becoming

available for our use. Consequently, about all we can be reasonably certain of is that which we can see. However, from a practical point of view, that is approaching too closely the position illustrated by the story of the two Quakers discussing the trustworthiness of man. One said, "Brother, I've concluded that I can trust no man except me and thee--and, sometimes I have my doubts about thee!"

It is patently impossible to plan without some form of projection. Even assuming that everything remains static and in its current condition (such as a plan based upon the present situation with respect to price levels, technology, population, industry, and so on) an implicit projection of this condition has been used and it is likely the worst possible assumption that can be made because experience shows that changes will most certainly occur. The uncertainty relates to the degree and direction of change. Rather than belabor this point, however, please permit me to refer you to a paper by Professor Ormond Corry, which deals with the problems inherent in attempts to develop rational user projections in considerable detail.[2/] In this paper he differentiates between projections and predictions or forecasts. As Professor Corry correctly says in his paper regarding projections, "....the things to watch are the assumptions, and the implicit assumptions may

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2/ "Potential Demand and Current Resources for Medicare Services: The People, Their Numbers, Ages and Family Incomes to 1975," by Ormond C. Corry, The University of Tennessee. Paper presented before the Statistical Section, Annual Meeting of Tennessee Public Health Association and Conference of Public Health Workers, October 6, 1966.

range from the choices and uses of input data to over-simplification of complex phenomena." The most sophisticated projections have explicit statements regarding what the author considers to be the major assumptions.

Unfortunately, our experience indicates that small-area projections are, or should be, influenced to some degree by implicit assumptions which are not, perhaps cannot, be stated at all. How does one state the effects of religion, community mores, general attitudes, political schisms, etc., on community growth? I have observed some of their effects within numerous communities during more than 30 years of involvement in water resource development studies. In many of these studies, primary data were collected through interviews with thousands of individuals and firms. In many instances, it was found that the economic status of an entire community, sometimes an entire county, was significantly influenced by one or more of the mathematically "non-quantifiable" 3/ factors. How else, for example, does one explain the absence of the most lucrative agricultural enterprise from a community located in the middle of a larger region noted for producing the commodity in question? Other factors being essentially the same, individual explanations were that "it was against their religion to use the product or to produce the crop." These and other similar experiences

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3/ Not usually quantified or taken into explicit account in mathematical projections.

and observations have convinced me that the most acceptable small-area projections must take into account the factors which are difficult to quantify, even though a somewhat generalized and subjective adjustment for them is resorted to. This element of the problem was one of many reasons for creating, using, and encouraging the continued use of advisory committees comprised of the most knowledgeable local people practicable in each State of the Southeast Region for arriving at mutually acceptable projections for use in planning.4/

4/ See "Georgia County Population Projections as Developed by the Georgia Social Sciences Advisory Committee," by C. V. Lyle and published by the Industrial Development Division, Engineering Experiment Station, Georgia Institute of Technology, February 1968, (pp 1-7), and "Economic Problems of Water Pollution Control in the Southeast" by C. V. Lyle, USDI, FWPCA--a paper presented at the annual meeting of the Association of Southern Agricultural Workers, Louisville, Kentucky, February 5-7, 1968, (pp 2 and 3).

Need for a Commonly Accepted Projective Economic Base

Meaningful planning, responsive to minimum needs for evaluation, requires that attempts be made to describe the following situations:

1. The future condition expected to prevail in the absence of the planned effects of new programs or projects proposed. A curve drawn to describe this condition over time may be called the "normal" 5/ growth path.

2. The future condition as modified by expected effects from the planned program or project. A curve drawn to describe this condition may be called the "planned" 6/ growth path.

5/ "Normal growth path or "normalized" projections--
As used, this refers to expected future growth in the absence of newly planned or unanticipated programs, projects, technological developments, and so on. All major assumptions, as well as assumed inclusions, should be stated. Pertinent parameters involved are specified separately, with interactions and interrelationships taken into full account.

6/ "Planned" growth path--
This is intended to reflect the new rate of growth assumed to be caused by the program or project under consideration. The same major parameters are described separately for the "planned" growth path as for the "normal."

3. Obviously, if all reasonable alternatives are examined and taken into appropriate account, a growth path must be developed and described for each alternative. An evaluation of each alternative, when compared to others assigned to meet essentially the same objectives, can be expected to result in one being recommended over the others for achieving the program or project objective for changing the "normal" (without program or project) growth.

4. The differences between the "normalized" growth path (without program or project conditions) and the "planned" growth path (with program or project conditions) provide the information required for describing the impact of any plan or alternative plan when implemented. As inferred in item 3, above, it also provides the appropriate basis for evaluating such impact.

The evidence is clear that plans are commonly made and evaluated without reference to a common and mutually acceptable point of departure--such as the one we have chosen to call the "normalized" growth path. However, when this is done, practically all possibility of achieving comparability between plans is lost. An engineer, for example, who accomplished his work through the use of "temporary bench marks" does essentially the same thing in principle and, although it may serve his immediate purpose just

as well, no other engineer will know how to check his work or compare it with similar work performed by others. On the other hand, however, if he uses "mean sea level" as his point of departure, others can determine his point of departure, can check his results, and can perform their work in a manner designed to secure comparable results.

"Normalized" projections may be viewed as the social scientist's equivalent of the engineer's "mean sea level" for survey and related planning purposes. At this point, it should be emphasized that, although it makes comparability of results possible, it does not assure such comparability. However, use of a common base does make it possible, as well as feasible, for others to check for comparability with other programs and projects. Without it, however, such checks are practically impossible (at least, not usually feasible). Much more, I am sure, could be said in favor of the use of a commonly acceptable point of departure for planning purposes. Much may also argue against such procedures. Most arguments, however, which militate against this approach are equally applicable to any other approach utilized for estimating future conditions. Planning, by its very nature, is futuristic and demands either deliberate or indeliberate use of projections.

Need for a State "Center"

As I see it, adequate organizational and institutional arrangements for implementing a satisfactory solution to the problem of providing a commonly accepted projective economic base will involve the use of state "centers" in which the professional competence has been developed to perform the analytical work, the projections, and the coordinating functions required. It will also involve the use of advisory committees to provide the input of local knowledge required to take account of the effects of the social, cultural, and religious peculiarities of each small area for which projections are developed. The advisory committee [7/] should also serve as a competent group for reviewing results produced by the "Center" to ascertain their mutual acceptability for planning and implementation purposes--Federal, non-Federal public, and private. This will require the maximum "feedback" practicable, if it is to function most effectively and in a manner satisfactory to most participants. Another advantage of the committee approach is its ability to provide a meaningful forum for communication on the development and uses of projections.

Justification

It is said that "an idea whose time has come will not be denied." Numerous Federal and state actions (many of them recent) recognize the need for coordination and cooperation in many fields

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7/ See footnote 4 above.

of mutual interest. The tremendous response to the individual and purely voluntary State Social Sciences Advisory Committees created on an informal basis throughout the Southeast, beginning over five years ago, indicated the widespread realization that a problem existed (and still exists) in the area of economic base projections which needed correction. Among planners, this conclusion appears to be almost unanimous.

The need for a recognized and competent "center" in each State to develop and, especially, to coordinate small-area economic base projections to serve as the underlying basis for planning is indicated by the following observations:

1. The tendency to proliferate unnecessarily--i.e., the development of too many duplicative projections which are often not only unrelated but inadequately described and substantiated. This propensity has appropriately been described as the "reinvention of the wheel."
2. The tendency to leave gaps--i.e., the failure of current "hit or miss" methods to develop any projections for certain small areas. Any tendency in this direction can be avoided by the use of the "Center" concept.
3. The tendency to produce small- and intermediate-area projections in a "vacuum"--i.e., the failure in too many instances to appropriately relate projections of the expected growth of one area to that of other closely associated areas

and to the nation as a whole. Interrelationships and interdependencies among and between areas must be taken into appropriate account if projections are to have acceptable validity for planning purposes.

4. The tendency of most projectionists to omit adequate statements of assumptions, methods, and techniques used. This leaves the potential user in a quandary not only as to the validity of the projections for any purpose but, even if accepted on "good faith," uncertain as to their applicability in solving his planning problems. The ones the Committees are currently using fall in this category. Although they are used as the "best available," we would certainly prefer more acceptable ones. A "Center" adequately staffed for this purpose can be expected to help correct this situation.

5. The tendency of each individual or group, irrespective of competence, to assume an "accuracy" in their own projections and an "inaccuracy" in all others. This only leads to confusion. Except for the mechanics of the calculations used, we contend that obtaining "accuracy" in a projection is as impossible as developing "perpetual motion." What we are seeking is "acceptability" to users. This must, of course, include "validity" for the purpose for which the projections are used. To achieve mutual acceptability, we feel the

initial effort of the "Center" must be limited to developing a "normalized" projection designed for use as a basis for planning--not a projection that embodies the effects of any new plan or technological development in addition to the effects of normal growth trends in their absence. Developing projections with this in mind avoids implications of pre-empting the authority and responsibility of others for developing future plans designed to modify growth patterns (whether deliberately or indeliberately). It also avoids the impossible task of foreseeing and measuring the impact on growth of unknown future technological developments, economic movements, and so on. It does, however, provide a stable basis for measuring impacts of new programs, projects, technological developments, and so on, as they emerge and are clearly defined.

I think it is obvious that tremendous inefficiencies exist because current procedures utilized in developing projections for use in planning are basically unsound and ineffective, and they are most certainly far from satisfactory to most professional people involved in planning (i.e., economists, planners, engineers, administrators, and so on). Great savings of both public and private capital can be expected to result by eliminating duplicative efforts and the results will certainly be more acceptable for planning and program evaluation and implementation purposes.

Responsibilities of the "Center"

A first responsibility of the "Center" should be to develop, coordinate and disseminate all official current estimates of State and small-area demographic and related economic base values required for use in planning. Most states already have one or more centers which perform portions of such work. None, however, with the possible exception of Georgia, have explicit charges to develop long-term economic base projections which are compatible with those Federal water resource planners are required to use. Georgia now has an Act entitled "Georgia Act 1066, 1970" which recognizes the need for intergovernmental cooperation and which meets the same requirements of the Bureau of the Budget Circulars Federal agencies must meet. And, by interpretation of the Act's provision by the Director of the "Bureau of State Planning and Community Affairs", which was created by the Act, this State agency will develop the competence required and act as the "Center" for the State of Georgia.

A statement provided by Professor Ormond C. Corry in response to my request for a review of an earlier draft of this paper summarizes work now underway by state agencies in the fields of current estimates of local-area population and personal income.[8/]

8/ Also see Ormond C. Corry, "Filling the Intercensal Data Gap: Census Bureau Cooperative Estimate Program," Tennessee Survey of Business, April 1970, pp. 3-6, 16.

"The Georgia State Planning Bureau and state university centers or bureaus of business and economic research in other southeastern states are participants in the Bureau of the Census' Federal-State Cooperative Program for Local Area Population Estimates. These agencies have been designated as state representatives by the governor's office in each state and the Census Bureau has created a new publication series for national distribution of their annual population estimates. Thus, the estimates should attain official status for intrastate uses and provide bases for more extensive demographic work.

"Also, the university bureaus of the southeastern states have accepted for analysis and publication the Office of Business Economics annual estimates of personal income by county. Reports have been published by the Kentucky, Mississippi, and Tennessee bureaus and other state reports are being prepared. The bureaus are now developing plans for expanding this interstate cooperative work, which has been done through the County Income Conference, to include broader based economic analyses and projections for local areas. The projections are to be consistent with official or authoritative national data such as those on population, personal income and employment developed for the Water Resources Council by OBE, and, possibly, the employment-occupation manpower projections by BLS."

Responsibility for historical information and current estimates requires coordination among various Federal departments and agencies having a legislative mandate to provide, among other data, the input elements of the economic base. Thus, in addition to the programs cited above, the Water Resources Council has current responsibility for coordinating the planning for all Federal water resources agencies. With support provided by the Council, the Office of Business Economics, Department of Commerce, and the Economic Research Service, Department of Agriculture, have made, and are now revising to completed form, statistically consistent population, employment, and personal income projections for selected years to the year 2020 for the "OBE Economic Areas" and the Water Resource Planning Areas of the nation, as jointly delineated by Federal, State and local agencies.

The essence of this proposal is that the "Center", whether it is a State agency with a broad multiple purpose program or a new special mission one, should have officially designated responsibility for developing, coordinating, and disseminating short- and long-term State and small-area economic base projections. Principal concern at present should be the development of State and small-area projections which are completely

compatible with (and as disaggregations of) 9/ those being developed by the Office of Business Economics and the Economic Research Service (OBERS) for the Water Resources Council. The authoritative and comprehensive nature of the Water Resource Council projections gives them an "official" status other projections do not have. They provide the normalized growth paths for OBE Economic Areas and Water Resource Planning Areas required by many agencies and groups. They also provide an ideal basis for the development of disaggregated and commonly acceptable projections for smaller areas and other area combinations which, in turn, provide the flexibility required of the economic base values if the many and diverse planning purposes of the various planning groups are to be served.

As the "Center" develops staff competence and capability, it can be expected to accept contractual responsibility, as may be found mutually desirable, for providing expert assistance needed by "action" agencies having specific authority and responsibility for formulating, evaluating, and implementing programs and projects. Both public and private agencies and corporations (including consulting firms) can be expected to utilize the services of such a "Center" in the interest of their own internal efficiences and flexibilities as well as in the interest of the general public.

9/ There is a disagreement among experts in the field regarding this point. Comparability and compatibility are of vital importance and may be more easily obtained through use of the same statistical procedures in disaggregating "OBE Economic Areas" to smaller areas as were used by OBE in disaggregating national values to Economic Area values. However, there are other important considerations to be accounted for in making small-area projections, as previously indicated, which are <u>not</u> accounted for in the OBE model or any other purely disaggregative model with which I am familiar.

Staffing and Cost of State "Center"

Staff requirements and cost can vary tremendously, depending upon what view is taken regarding the scope of responsibilities of the "Center" as well as upon the acceptable output made available by other closely related agencies and groups. Most Bureaus of Business and Economic Research, for example, already have the authority and staff capability to develop the demographic and economic estimates required as a basis for projections, to analyze current and historical data, and to make both small- and large-area forecasts (usually short-run--one year or less). A few have become involved in relatively long-run projections. None, however, have yet integrated these with the national projections of the Water Resources Council in a manner calculated to make them useful for planning by both Federal and non-Federal resource planners (particularly, water resource planners who are coordinated by the Water Resources Council). Thus far, the latter statement is also applicable to State planning agencies.

In the preparation of this paper, advice was sought from numerous knowledgeable individuals within the major universities and State planning agencies of the Southeast. In responses received, some of the variations as to the size and composition of a staff for the "Center" are likely explained by the differences in usable related work currently being performed in each State. Most of the variations, however, appear to involve conceptual differences regarding the appropriate functions of such a center.

All respondents 10/ who specified staff composition were generally agreed on the disciplines required for the task to be performed by the "Center". Most of the differences involved specialties within the broad disciplinary groups. In all cases, it was proposed that the director of the "Center" be an economist (either an economic planner or analyst, regional economist, "an economist with broad experience in Macro theory and applications," and so on). As was pointed out by Mr. Trott 11/ "he [the director] should have the capability to come to conclusions in the area of socio-economic and demographic problems for small geographic areas. Also, he must be able to make these decisions in the absence of 'perfect' data... Additionally, the director should be.... politically astute at both the State and local level...."

In one way or another, it was recognized that (in addition to the economist-director) staff competence must be available to the "Center" on a routine basis for the following specialties: (1) demography, (2) computer programming, (3) agricultural economics, (4) graphic illustration, (5) sociology, (6) civil engineering, and (7) statistics.

10/ The term "respondents" is used here to refer to those reviewing preliminary drafts of papers on the subject under discussion in this paper and is comprised of professionals given credit under the section on "Acknowledgments" for contributions to it.

11/ Edward A. Trott, Jr., Supervisory Economist, Economic Service Branch, Regional Economics Division, USDC-OBE.

I would also add: (1) industrial engineering, (2) industrial economics, and (3) hydrology (flood and drought probability analyses in particular). If program and project impact studies are to be undertaken, photo interpretation specialists can also be of great help in reducing the cost of identifying significant cultural features of the landscape ahead of necessary field investigations. This specialty, however, may be expected to be a part of the qualifications of one of the others already mentioned (particularly one of the engineers). When, and if, impact studies are undertaken many other disciplines will also be required. However, it can be expected that the agency authorized to perform the work will provide them.

Most of the disciplines and specialties would not be needed by the "Center" on a full-time basis. Consequently, a major problem is contingent on arrangements for having them available to the "Center" when needed--without employing all on a full-time basis at a prohibitive cost for the purposes at hand. Solution to this problem, as a first step, involves the careful analysis of institutional, organizational, and staffing arrangements available within the State (on a practical basis) for accomplishing any part of the total task visualized as the ultimate responsibility of the "Center".

There are two basic organizational approaches to the problem which either have been or may be used successfully in the above connection. Each has its own advantages and disadvantages. <u>One</u> involves location of

the "Center" in a unit of State government (particularly in instances where current legislation requires that a unit of State government have responsibility for all estimates and projections for planning purposes as was indicated for Georgia). Another involves locating the "Center" within a Bureau of Business and Economic Research (or its equivalent) at a major State university. It is my understanding, for example, that the latter is the most probable course of action to be followed in the states of Alabama and Florida. In other states of the Southeast, the course is not equally clear. Some combination of the two basic approaches may be required in some states and would likely prove more efficient in all. In the Commonwealth of Puerto Rico, the Planning Board is clearly recognized by all Commonwealth agencies as the appropriate one in which to locate the "Center". Plans are currently under way through which cooperative efforts between the Planning Board and the Office of Business Economics, U. S. Department of Commerce, will be utilized to create an effective "Center" within the Planning Board while, at the same time, generating needed small-area data and developing both large- and small-area economic base projections for use in planning. Required personnel are already available to the Planning Board. Specialized training of a designated nucleus will be required, however, to form the "Center" for the purpose at hand. A part of the OBE effort will be to provide the necessary training. In Virginia the basic elements of the "Center" suggested in this paper already exist within the Research Section, Division of State Planning and Community Affairs, Governor's Office, Commonwealth of Virginia.

Minimum Initial Staff

To develop the "normalized" small-area economic base projections required as a basis for planning (item 1, page 6), a minimum full-time staff will be required. From the expert advice received, it appears that, to be acceptable and effective, the minimum initial staff for the "Center" should be comprised of one economist (regional or similar background) as director, one assistant (demographer, economist-demographer, engineer-planner, or planner), one research assistant and one clerk-typist. At the salary rates indicated by Mr. Griffis 9/ as current in Virginia, the minimum staff described is estimated to cost approximately $60,000 annually (including overhead at 20 percent and travel at $10,000). This minimum staff can function effectively only if it maintains near perfect communication with and receives complete cooperation from the following groups, as we understand is the case in Virginia: 1. The Bureau of Population and Economic Research of the University of Virginia (or its equivalent), 2. The Bureau of Vital Statistics of the State Health Department (or its equivalent), 3. The Employment and Security Commission (or its equivalent), 4. The Department of Labor and Industry (or its equivalent), 5. Industrial Development Division (or its equivalent), and 6. all user agencies (such as Departments of Conservation, Highway Departments, and so on). In addition, liaison and cooperation must be maintained with OBE, Census Bureau, and other related Federal data generating agencies as well as with Federal user agencies. A Bureau of Economic and Business

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9/ Mr. Robert J. Griffis, Economist, Research Section, Division of State Planning and Community Affairs, Governor's Office, Commonwealth of Virginia.

Research (or Center for Business and Economic Research) could be expected to function equally well, perhaps better, with the minimum staff suggested (or, possibly, with even less addition to existing staff). In either case, however, arrangements must be made to take account of the impact on growth of agriculture (including forestry and fisheries). Close cooperative working relationships with the agricultural experiment station, particularly with the department of agricultural economics, may be utilized to solve this problem. Whether this will add to the annual cost of operating the "Center" will, of course, depend upon how much of the work required is being performed under existing and continuing authority and appropriations. In all cases, unnecessary duplication of effort should be avoided in the interest of efficiency.

Under current circumstances and institutional arrangements in Virginia, Mr. Griffis indicates that, in his opinion, an adequate staff would consist of the minimum described, plus an additional assistant to the director, another research assistant, and a data clerk. This would add at least $20,000 to $22,000 to the annual cost of the minimum staff previously described.

The preceding evaluation is in close agreement with five of the six responses specifying both staff and costs received from university and State and Federal agency representatives (estimated annual costs suggested by them ranging from $40,000 to $100,000). The highest cost estimate, however, placed annual costs of the "Center" at $225,000. It included a

programmer, a graphic illustrator, one or more reference clerks, an agricultural economist, and a demographer, in addition to the minimum staff previously indicated. In addition to considerably higher salaries than Mr. Griffis indicated for Virginia, this cost presumably allowed for some computer time also. However, the estimate assumed that "some specific components of the Center's work would be 'contracted out'," and did not include the contract amounts. So, in effect, the highest estimate was $225,000, plus the cost of any required contract work.

It is possible that the higher cost estimates indicate a less desirable institutional and organizational arrangement for accomplishing the task at hand rather than a more sophisticated product. Consequently, they may indicate a lower degree of efficiency in performing the required work. From a practical standpoint, however, it must be recognized that under certain legal, institutional, and organizational arrangements the higher estimates may well be in order if an acceptable output is to be obtained--at least until the indicated constraints can be removed.

Flexibility of the staffing pattern (i.e., the ability of the "Center" to utilize specialists from other departments on a part-time basis; purchase required computer, graphic illustrator, and other services; and utilize data and analytical output from other competent sources) can go far toward minimizing the annual cost of work performed. It can also add to its attractiveness as a center for performing work required by planners and others in helping to evaluate the impact of proposed development programs and projects (items 2 and 3, page 6).

Potential

The ultimate potential of the "Center" is probably beyond one's ability to visualize. I think it is clear, however, that evaluation of social and economic impacts of proposed programs and projects, as well as of new discoveries and related technological developments in terms of their effects upon the economic base, requires the same expertise as is required in the development of the normalized economic base itself. Consequently, it follows that the competent group brought together in a "Center", as described, and properly trained to develop acceptable values as a basis for planning can be expected to serve as the nucleus around which a most efficient and effective staff for evaluating the impact of proposed programs and projects can be developed. Because of the probable variations in requirements within a State at different points in time as well as the variations between states, any attempt to specify the number of staff members and cost at this place and time would be relatively meaningless. However, we will attempt to indicate some of the uses and potentials. The nature of the projections undertaken, the geographic and parametric detail required, the availability of data required (whether staff effort is required to generate data), and similar factors will dictate the ultimate size, character, and composition of the "Center's" staff as well as its overhead and operating costs.

Assuming acceptability and availability of the "Center's" output, all planners (Federal, State, and local--public and private) can be expected to make use of the basic projections developed. As previously

indicated, it is anticipated that many, if not all, of the user agencies (users of the basic projections) will eventually recognize and make use of the capabilities of the "Center", if fully developed, for purposes of evaluating the social and economic impacts of proposed programs and projects, to the extent possible. This is expected to occur in the interest of internal efficiences and increasing the acceptability and effectiveness of their proposals. Some of the major user agencies and groups, as indicated by participation in our various State Social Sciences Advisory Committees, are as follows:

Federal-- (1) Department of the Interior: FWQA, BOR, and Bureau of Commercial Fisheries; (2) Department of the Army, COE; (3) Department of Housing and Urban Development; (4) Department of Agriculture; SCS, ERS, FS, and FHA; (5) Department of Commerce, EDA; and (6) TVA.

State-- (1) Planning and development offices, bureaus, or departments (or their equivalents); (2) departments of health, particularly air and water pollution control activities and comprehensive health planning; (3) departments or boards of conservation; (4) departments of commerce (or equivalent), particularly offices of research and planning; (5) departments of industry and trade (or equivalent); (6) regional (or area) planning and development commissions which are officially a part of State government, and (7) waterway authorities.

Local Public-- (1) City planning boards and commissions; (2) committees of 100; (3) county planning boards and commissions; (4) regional (or area) planning and development groups not officially part of State government; (5) local and regional councils of government; and (6) city and area chambers of commerce.

Private-- (1) Telephone and telegraph companies, (2) power and light companies, (3) market planning and research corporations, (4) consultants, (5) news and related companies; (6) industrial development associations, (7) gas corporations, and (8) research institutes.

In addition to the preceding, the Resources Advisory Board; Southeast River Basins, is a multi-state entity which is currently a user of the population projections from the Advisory Committees. Many other agencies and groups can be expected to use the output from the "Center" when approved by the "Advisory Committee". The Department of Health, Education, and Welfare--particularly planners for Hill-Burton Hospitals and those responsible for educational needs within the Office of Education--can be expected to become a major user. State and local planning to meet these needs must also become a user. The same is true for local, State, and Federal planning for transportation.

As was indicated by Mr. David Kay, Economist for HUD, Atlanta, the need for implementing the "Center" concept is so obvious and the potential savings in Federal, State, and local costs so great as to suggest

that implementation should not be delayed any longer than absolutely necessary. He pointed out that HUD can be expected to use the output "in all of its program allocations, particularly in housing, plus local planning agencies funded by HUD (such as local councils of government, regional metropolitan and local planning agencies, and so on)."

Acknowledgments

During a period of approximately 30 years of working with many individuals and groups interested in improving the situation with regard to planning (six years in water quality control), I have received much help and encouragement and many new insights into the many problems involved and into a few of the possible solutions. Important contributions have come from so many that it is impossible to give due credit to all. Each member of the State Social Sciences Advisory Committees (which have been operative for about five years) has contributed in one way or another and the vast majority in a most constructive manner.

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